series as we descend, the anterior corpora bigemina or their homologues, the optic lobes, become more and more important as optic centres until they are finally the exclusive centres for vision. As regards the history of the degenerative process v. Monakow finds that in the pulvinar and the anterior corpora bigemina the degenerative process after removal of the visual area first attacks the ganglion cells and only secondarily and later is the ground substance involved. Further, that the stellate cells are comparatively early productions in the process, being absorbed in the later stages.

A continuation of the paper is promised.

Makroscopische pathologisch-anatomische Hirnpräparate. DR. C. v. MONAKOW. XIV Wanderversammlung südwestdeutscher Neurologen und Irrenärzte, Mai, 1889. Abstract in Neurolog. Centralbl, No. 13, 1889, by Dr. L. Laquer.

v. Monakow exhibited the following preparations:

1. Brain of dog from which on the day of birth there were removed the entire occipital and a portion of the temporal lobes on the left side. Death after eight weeks, corpora geniculata externa, pulvinar and corpora geniculata interna on the left side much atrophied. Left optic tract up to chiasma considerably reduced in volume. Both nervi optici slender.

2. Brain of a dog from which the larger part of the right cerebral hemisphere was removed three days after birth. Besides the frontal end and the olfactory lobe only fragments of the gyrus fornicatus and sigmoideus and of the temporal lobes remained behind. The internal capsule was completely severed. Death after 8½ months. There was found great shrinkage of the thalamus opticus, corpora geniculata externa and corpora geniculata interna on the right side; evident flattening of the right anterior colliculus of the corpora quadrigemina and the right corpus mammillare. Right pyramid had completely disappeared and the pons on the right side was flattened. Right optic tract as far as the chiasma reduced to half the size of the left one. Both nervi optici small but not macroscopically very different from one another. The region of the nuclei of the columns of Goll and Burdach slightly depressed on the left side; corpus callosum very thin. The cerebellar hemispheres quite normal and similar but the hemisphere on the right side had expanded somewhat into the cavity left by the removal of the occipital lobe on that side.

3. Human brain extensive region of softening in the left occipital lobe. Patient a painter, 68 years of age, who suffered from hemianopsia and alexia. The medullary substance in the region of the angularis, the first occipital convolution and the caudal-dorsal portion of the præcuneus for the most part destroyed and absorbed, giving rise to an extensive cyste. The softening nowhere reached the sagittal fibers. Posterior cornu much distended, cuneus and the second and the third occipital convolutions intact. The same was true for the ventral portion of the bundle of Gratiolet. The cortex of the gyrus angularis appeared quite normal. Secondary degenerations were observable in the dorsal portion of the bundle of Gratiolet on the left side as far as the lateral fiber layer of the pulvinar. Considerable secondary reduction in the pulvinar and corpora geniculata externa on the left side. Atrophy of the arm of the anterior colliculus and of the caudal portion of the left tractus opticus.

The right optic nerve as large as the left but somewhat gray on its mesial side.

4. Brain of an idiot about 28 years of age who at the age of two had experienced an embolism of the left arteria fossæ Sylvii. On the left side the first temporal convolution is wanting and the ventral portion of the left parietal lobe, the medullary substance having especially suffered. Lateral ventricle much distended. Secondary atrophies; left pyramid very slender. The median nucleus of the thalamus opticus and the tuberculum anterius much diminished, while the pulvinar and the corpora geniculata externa corresponding with the fairly normal condition of the occipital lobe are almost as well developed as on the right side. The left corpus geniculatum externum has however almost completely disappeared. The corpora striata are normal on both sides. v. Monakow then expressly called attention to the fact that the intimate connections shown by him to exist between the various portions of the cortex and the inter and mid-brain were true not only for the rabbit, but also for the dog and man, being indicated by the secondary degenerations following cortical lesions. The dependence of the corpora geniculata externa on the cortex of the temporal lobe is for the first time described for man, but corresponds with observations previously made on both the rabbit and cat. The cases 1 and 3 also illustrate the necessary degenerations of the primary visual centres after the injury of the occipital lobes.

Ueber Befunde bie Erkrankung des Hinterhauptslappens. HOELE. Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten. Sitzung vom Juli 8, 1889. Rev. in Neurolog. Centralbl. No. 14, 1889, by Hadlich.

The author presents observations of three cases in which there was disturbance of vision during life and the autopsy showed lesions in the occipital lobes, with which these symptoms were associated. At the same time the optic pathway from the cortex to the eye was more or less involved showing signs of atrophy. The results were presented as a contribution to the localization of vision in the occipital lobes.

Ueber die centralen Organen für das Sehen und das Hören bei den Wirbelthieren. HERMANN MUNK. Sitzungsber. d. Königl. Preuss. Akad, d. Wiss. zu Berlin. XXXI. 20 Juni, 1889.

This condensed account of Munk's views on some disputed points forms the fifth and closing paper of a series which commenced in 1883. In it he presents, besides his critical remarks, the main results of further work on dogs, monkeys and newborn rabbits.

In operating dogs and monkeys he recommended that the portion of the brain removed be cut out in one piece, one advantage of this method being that it enables the experimenter to see pretty accurately what the extent of the initial lesion is. The results are similar to those obtained by his previous procedure. These in the main have been corroborated by Sanger Brown and E. A. Schäfer and by Vitzou from the experimental side, while from the pathological side Nothnagel furnishes evidence for a similar relation of the cortex in man. Munk extends his results to the lower mammals, on the ground that though the visual centres are not well made out there, yet in rabbits,